

Central Valley Regional Water Quality Control Board  
25 January 2008 Board Meeting

**STAFF REPORT**

**HILMAR CHEESE COMPANY, INC.  
CHEESE PROCESSING PLANT  
MERCED COUNTY**

The Hilmar Cheese Company's Processing Plant is one-half mile north of the unincorporated community of Hilmar in Merced County. Hilmar Cheese historically discharged wastewater to agricultural fields near its Plant called the "Primary Lands." In September 2000, Hilmar Cheese installed a reverse osmosis system and began discharging the lower salinity treated water to other agricultural lands surrounding the Plant called the "Secondary Lands."

On 2 December 2004, the Executive Officer issued Cleanup and Abatement Order No. R5-2004-0722 directing Hilmar Cheese to sample groundwater supply wells near the Primary Lands, complete an investigation of the vertical and horizontal extent of degradation, and complete a technical evaluation of possible remedial cleanup alternatives.

In March 2005, the Regional Water Board ratified a Settlement Agreement with Hilmar Cheese that, in part, specified interim operating limits reflective of the existing discharge and required Hilmar Cheese to submit by 31 October 2006 a Report of Waste Discharge to resolve its wastewater treatment and disposal issues.

**CLEANUP AND ABATEMENT ORDER**

The Cleanup and Abatement Order required Hilmar Cheese to survey and sample private wells within one half mile of its Plant. Hilmar Cheese conducted a survey of nearby wells and submitted a report summarizing the results of the survey, including groundwater analytical results, in July 2005. The report states that a significant number of wells, upgradient, sidegradient and downgradient of the Plant, exceeded primary or secondary drinking water standards for constituents of concern. The report concluded that additional assessment was needed to determine whether impacts to the surveyed wells were a result of Hilmar Cheese operations or other sources.

The Cleanup and Abatement Order also required Hilmar Cheese to assess the lateral and vertical extent of groundwater degraded by its operations. Hilmar Cheese conducted a first phase of groundwater assessment and submitted the results in August 2007. Hilmar Cheese assessed groundwater quality to a depth of 100 feet upgradient of the site, beneath the site, and offsite downgradient and close to the borders of the site. The report concluded that groundwater beneath

the site may exhibit reducing conditions that can mobilize naturally occurring arsenic, and that concentrations of chloride, iron, manganese, arsenic, nitrate, and sodium at several locations exceeded the preliminary screening levels (primary and secondary maximum contaminant levels, and other regulatory limits). The report stated that “total dissolved solids impacts from the site (i.e., total dissolved solids above 1,000 milligrams per liter) extend to and beyond the site boundaries, and to the maximum depth investigated (i.e., 100 feet bgs).

Hilmar Cheese’s consultant has recommended additional assessment to better define ambient groundwater conditions in the vicinity of the site, and the magnitude and extent of impact resulting from Hilmar Cheese operations, confirm if the Corcoran Clay, a significant regional confining layer, is present beneath the site, and evaluate the potential for reducing groundwater conditions. This recommended assessment will include drilling additional borings upgradient of the site to assess background water quality, and deep borings (up to 250 feet bgs) beneath and downgradient of the site to assess the lateral and vertical extent of groundwater degradation that may have occurred due to Hilmar Cheese operations. The proposed additional assessment has been approved by the Executive Officer and a summary report will be submitted by early summer 2008.

Upon completion of assessment of groundwater degradation, the Cleanup and Abatement Order requires that Hilmar Cheese submit a technical report that evaluates remedial action and cleanup alternatives and proposes an appropriate cleanup system. The Cleanup and Abatement Order also requires that Hilmar Cheese provide in-kind replacement of water supply for any private well that has been unreasonably affected by Hilmar Cheese operations, including taste and odor.

## REPORT OF WASTE DISCHARGE

The Settlement Agreement required Hilmar Cheese to submit a Report of Waste Discharge within 90 days of completion of its proposed underground injection well, or by 31 October 2006, whichever was earlier. The Report of Waste discharge was to also investigate other wastewater treatment and disposal alternatives in addition to the injection well.

Hilmar Cheese submitted an October 2006 Report of Waste Discharge that committed to continue complying with interim operating limits and submit a revised Report of Waste Discharge by October 2007 for the following proposed alternatives:

- Improvements to the existing wastewater treatment system;
- Deep well injection;
- Use of additional lands for disposal; and

- Surface water discharge of treated wastewater.

A revised Report of Waste Discharge was received on 15 November 2007, which outlined activities conducted during 2007 to improve the Plant's wastewater treatment and disposal capacity.

Improvements to the existing wastewater treatment system included making various design and operation changes to the anaerobic digester and testing various polymers to improve treatment. Although improvements have been documented, Hilmar Cheese is still not able to consistently treat all its effluent.

In 2006, Hilmar Cheese installed an injection well, which has been permitted by the United States Environmental Protection Agency but is not yet fully operating. The wastewater delivery system from the Plant to the injection well is complete and Hilmar Cheese is currently conducting required tests prior to using the well for wastewater disposal. Test results have been promising, but it has not been determined how effective the well will be or what fraction of Hilmar Cheese's flow it will be able to handle.

Hilmar Cheese has identified additional lands in two major areas west of the Plant for possible discharge of wastewater in case improvements to the wastewater treatment processes or use of the injection well are not feasible. However, no specific parcels have been identified and no agreements with land owners are in place. Hilmar Cheese concludes that the areas would be suitable for discharge of non-treated wastewater because groundwater quality data indicates a significant decrease in quality from east to west. However, Regional Water Board staff has concerns because shallow groundwater in the area might have been affected by other discharges, the groundwater table is very high (six inches below the surface at times), and the areas are close to the San Joaquin River (within about a mile).

As an interim measure, the revised Report of Waste Discharge proposed to reduce the amount of high strength wastewater discharged to the Primary Lands and increase the amount of treated wastewater discharged to the Secondary Lands.

The revised Report of Waste Discharge concluded that discharge to surface water is not administratively or economically viable at this time.

Regional Water Board staff is in the process of drafting revised Waste Discharge Requirements for consideration by the Board that will address the above issues.